

ARMY AND NAVY CHRONICLE.

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CONGRESSIONAL DOCUMENT.

NATIONAL FOUNDRY.

[To accompany bill H. R. No. 1,032.]

January 12, 1839—Read, and 5,000 extra copies ordered to be printed.

Mr. W. C. Johnson, from the Select Committee, to whom the subject had been referred, submitted the following report:

The Select Committee, to whom was referred "so much of the Executive communication as relates to the establishment of a National Foundry for cannon, to be common to the service of the army and navy of the United States," submit the following report:

In entering on the duties assigned them, the committee could not but be aware that the subject referred to their consideration had heretofore been one of repeated and solicitous inquiry. In the first annual address of the President of the United States to the Senate and House of Representatives, he emphatically says: "Among the many interesting objects which will engage your attention, that of providing the common defence will merit your particular regard. To be prepared for war, is one of the most effectual means of preserving peace." In the wisdom of the policy thus early proposed, each succeeding administration has fully concurred, and never failed, upon all fit occasions, to urge its adoption. In a paper appended to this report, the committee have collated the views and opinions which have at different times been entertained in reference to the expediency and necessity of providing for the defence of the nation. The deep solicitude which has been manifested by the great men who have successively filled the office of Chief Magistrate, followed up, as it has invariably been, by the recommendation of the distinguished individuals who have been placed in charge of the different Departments, sufficiently manifests their sense of the importance of the subject. Yet, after a lapse of nearly half a century, but little has been done to perfect any system of national defence, although each passing year and each occurring event has fully proven the value of the admonition of the Father of his country.

As the right to declare war is among the most important powers of the General Government, to provide for the common defence is amongst its most sacred duties; and, in proportion as the circumstances and policy of a people are opposed to the maintenance of a large army, it is important that as much perfection as possible be given to that which may at any time exist, and that every facility be afforded to the people themselves to be their own safeguard and defence. Although remote from antagonist Powers of Europe, bound by no entangling alliance to espouse the quarrel of any which may be brought in conflict, and influenced, in our intercourse with all, by a friendly and pacific policy, yet are we liable to be involved in war; and to resist its calamities and dangers with success, must mainly depend on our timely and provident preparation. But, whether our country is to be suddenly plunged into war, or shall continue to enjoy the blessings of peace, it is equally the suggestion of policy and wisdom to improve our means of defence, and to give as much perfection as possible to such establishments as may be essential to our domestic tranquillity, as well as our security from foreign aggression. With the example of other nations, nay, with our own dear-bought experience, to admonish us, it would be worse than folly to procrastinate any longer the preparation necessary to meet those exigencies to which all Govern-

ments are liable. The present time affords an opportunity which ought not to be neglected—an opportunity involving our future safety and welfare, but which, rapidly borne on the wings of time, may never again return. History furnishes us with innumerable examples of immense countries being conquered in a short space of time, and which have cost the conquerors but few battles, from the want of fortified places to arrest their progress. At the same time, we find weak nations resisting, by means of their fortresses, a superior enemy, who has been obliged to renounce the fruitless attempt of conquest.

An enemy keeps his ground with difficulty, as long as there are fortified places in a country. They are points around which the vanquished rally; protected by them, they recover their strength, and are enabled to defend themselves anew. On the other hand, when armies are beaten and disperse in an open country without fortresses, all resistance must cease—their fragments are insulated, and too feeble to attempt any thing of consequence. Some prominent military writers have opposed the principle of fortifying an extensive land frontier, but none can deny the advantages of strengthening particular positions, and no military or political writer has ever disputed the necessity of fortifying a maritime frontier.

As regards the defence of the United States, the necessity of having certain points strongly fortified on the seaboard, on the lakes, and on the Canada frontier, must be admitted; whilst policy, justice, nay, even humanity to the people of the west, equally demand that a cordon of military posts, strongly fortified, should be kept up to check the savage hordes along the western frontier, whose natural feelings of hostility towards the border settlers have been continually augmented by the addition of those tribes we have sent amongst them. But, besides fixed and floating batteries, fortifications, and a navy, field artillery must be considered as constituting one of the chief means of the power of a nation.

From the time of Edward III, when the English first used artillery at the battle of Cressy, down to the present period, especially during the bloody wars of the French revolution, the success of armies, either in battle or sieges, has been owing, on one side or the other, chiefly to the skill and superiority of their artillery, its better disposition, and the celerity with which it has been manœuvred. From the siege of Toulon, where the star of Napoleon first arose, through many a well fought field, even to the sanguinary Waterloo, where Fortune deserted her spoiled favorite, most of his success was owing to the superiority of his artillery. And have we not recently observed the prodigious effect produced by the French in their successful attack on the castle of St. Juan de Ulloa? entirely to be attributed to the masterly employment of their artillery.

The advantage of increasing this arm in our service, and of introducing it more generally in our militia, has been frequently strongly urged upon your attention. Horse artillery would seem to be peculiarly recommended to the United States, when it is considered that all attacks on the seaboard must be made by an enemy waterborne from a distant country, who will consequently be badly provided with horses, while the United States might be able to oppose to such invaders a horse artillery so superior, and so promptly, as to give a decided advantage in attack or defence; and so long as they can prevent an enemy from procuring the horses of the country, and can maintain a superiority in this important arm,

they will have little to fear from an enemy, however powerful in infantry.

The Prussians were the first who used horse artillery, introduced by the great Frederick, at a time when the league which was formed against him called upon his genius to multiply his resources. "It was then," says his historian, "that the same army, transported with a celerity and precision till then unknown in war, was seen to triumph against superior forces during the same campaign, upon the opposite frontiers, to the east and west of his states." "It was then that horse artillery was seen accompanying strong advanced bodies of cavalry, without embarrassing or retarding their marches or evolutions." So decisive is the agency of horse artillery considered, in offensive as well as defensive operations, that it is held to be indispensable to all armies. It can accompany cavalry almost anywhere; it crosses rivers and morasses impassable to foot artillery; it thunders, in mass, and with great rapidity, upon an unexpected point of attack; turns a body of the enemy; takes him in flank or rear; can perform the services of advance posts, of artillery positions, of the rear-guard, and, in fine, that of a corps of reserve, from which detachments may be made as wanted; it is free from the inconvenience ascribed to foot artillery, of retarding and restraining the manœuvres and marches of troops; and has been admitted to be most certain protection to the evolutions of troops *indifferently instructed*, to support their attack with bayonets, and to render null, by positions taken seasonably and with celerity, the advantages which troops *better disciplined* might confidently promise themselves from superiority in manœuvres.

The policy which induced Congress, immediately after the late war, to decide on and provide for the national defence, by the establishment of a system of fortifications, was founded on the distressing and mortifying events to which the nation had been subjected. The vast body of men which it had been necessary to call into the field throughout the whole extent of our frontier; the numbers who perished by exposure; the loss of blood and treasure; the interruption of the mechanical and agricultural labors, were to be traced, in a great degree, to the defenceless condition of our coast, and the improvidence in not having in store an ample supply of the materiel and munitions of war. Had the valedictory admonition of the Father of his country been duly regarded, much blood and treasure would have been saved; no marauding enemy could have entered our bays, inlets, and rivers, with impunity; have laid our cities under contribution, plundered our towns, and annoyed the inhabitants of our whole seaboard by predatory incursions; and never would the disgrace have fallen on the nation of having their capital sacked, and left a heap of smoking ruins. It was these occurrences, however, this dear-bought experience, which induced the adoption of that system of defence by which fortifications have been erected, and others are now in progress at the most exposed and commanding positions along our whole frontier. But, judicious as was the adoption of the system, efficiently as it has been carried into effect, in location and construction of defences, what, after the length of time which has elapsed, and the millions which have been appropriated, is the present condition of the country? How far are the fortifications which have been completed capable of subserving the purposes for which they were erected? And what supplies of the munitions of war have we ready to meet any sudden emergency? From the information furnished the committee, it appears there are none of our fortifications provided with a full and complete armament, whilst many are crumbling into ruins, destitute of armament capable of the slightest defence; and that many of our chiefs ports and dock-yards are in such a

defenceless condition that a single armed ship might enter them with impunity, and in a few hours destroy millions of property, which it has taken years to collect.

A celebrated writer, (De Tocqueville) on the prospects and condition of this country, makes use of the following reflections: "It profits a people but little to be affluent and free if it is perpetually exposed to be pillaged or subjugated; the number of its manufactures and the extent of its commerce are of small advantage, if another nation has the empire of the seas, and gives the law to all the markets of the globe. Small nations are often impoverished, not because they are small, but because they are weak; and great empires prosper less because they are great than because they are strong. Physical strength is therefore one of the first conditions of the happiness, and even of the existence of nations. Hence it occurs that, unless very peculiar circumstances intervene, small nations are always united to large empires in the end, either by force or by their own consent; yet I am unacquainted with a more deplorable spectacle than that of a people unable either to defend or maintain its independence."

Agreeably to the report of the Engineer Department, the extent of our frontier, following the sinuosities of our coast, and the meanders of our rivers, has been estimated at upwards of twelve thousand miles. For the defence of this vast extent of country, embraced within the limits of our sea-frontier alone, it appears by the tabular statement which accompanied the report of the Secretary of War, and which was laid before Congress with the President's message, at the opening of the last session, than 1,178 guns will be required for the new forts completed; 2,573 will be required for the forts under construction; 782 for the forts rebuilding and repairing; 3,506 for the works projected by the board of engineers, but which are not yet commenced; and 5,282 for the prominent points along the sea-frontier, which will require protection, and for which no plans and projects have yet been made: amounting altogether to 13,321 pieces of ordnance, exclusive of what is required for the naval service, present and contingent, on the ocean and on the lakes, and exclusive, also, of what is required for the artillery of the public service, and of the field trains, which have been so strongly and so repeatedly recommended to be distributed throughout the country, and which circumstances seem to require should be most amply provided for the defence of our western frontier.

In the reports of the Ordnance Department, heretofore made, it is stated that many of the cannon belonging to the United States were in service during the Revolutionary war, and are of various calibres and patterns. In the report hereunto appended (marked A, No. 31) it is stated that there are 1,000 heavy cannon on hand, including mortars and howitzers, which are of old and unsuitable patterns, and ought not to be depended upon for the defence of the country. By this report it will also be seen that the whole number of battering cannon in the fortifications is 935, in depot 1,219, and at this time contracted for 150; making an aggregate of 2,304; having no less than 11,017 to be provided for the purposes specified by the Secretary of War. The number of shot required, allowing 250 per gun, is 3,330,250, while the whole of shells and balls in possession of the Government is only 309,309; leaving a deficiency of 3,020,941.

As to field-trains, considering the extent of our country, the difficulty and delay of transporting artillery from distant depots, and the policy of our Government as to the system of defence which we should adopt, the number of field-pieces should perhaps be upwards of 5,000, and yet we have on hand and contracted for less than 1,000; and but a modicum of ordnance stores—none, indeed, appearing to have been distributed among the States and Territories.

Of naval ordnance, it appears from the report hereunto annexed (marked B, No.) that the whole number of great guns which had been critically inspected was 1,453, exclusive of 789 cannon and grenades. Of this number 499 are below 18-pounders, and composed of *every description, shape and form*, of the manufacture of every nation of the earth that has cast a gun. A number of guns at each of the naval stations have been rendered totally unfit for service, and can never be used on board our ships of war with safety and efficiency. Of this description there are several hundred which ought to be condemned, and the deficiency occasioned thereby immediately made up with suitable guns of approved calibre and pattern.

As far as the committee have extended their inquiries on the subject, they have found one general opinion among the officers of the army and navy, that most of the cannon owned by the Government are unfit for service, and that the supply which the nation has is totally disproportioned to the requirement, and inadequate to the security of the country. It is a well-known fact that many of the guns on board our national ships, during the war of 1812, burst during the heat of action, and thereby destroyed more of our own gallant defenders than of our enemies. This is a frightful and horrible disaster, and sufficient, of itself, to deter our sailors from entering into the service of the Government, who are thus regardless of the lives and limbs of those who risked every thing in the service of their country.

There are but four foundries employed in casting cannon and shot in the United States, under contract with the Government, viz: the Columbia foundry, near Georgetown, District of Columbia; Belloona foundry, on the James river, 12 miles above Richmond, Virginia; the West Point foundry, on the Hudson, above New York; and the Penn foundry, at or near Pittsburg, Pennsylvania. And if all these were kept in operation, allowing all possible zeal, good faith, and exertion on the part of their proprietors, it would take many years to supply the immediate and contingent wants of the Government in the several branches of the land and naval service.

Under these circumstances, what would be the condition of the country in the event of a sudden war? Those very forts which have been erected at such an expense could not be put into a state of defence, but would fall an easy conquest into the hands of any enemy; and, instead of affording protection to our own people, would become depots and citadels for the enemy, from whence to send forth their marauding parties, or to concentrate their forces for bolder enterprises; no barriers being interposed, a free ingress to the interior would be opened, and our very inland towns subjected to predatory incursions. Our navy could neither be augmented, nor secure the fruits of victory; and, if driven from the seas by stress of weather or a superior force, would have scarcely a harbor where they could repair their loss and disasters, or be refitted in security, so as to recommence active operations.

Looking westward, too, and considering the elements of strife and bloody warfare which hang as a dark cloud ready to burst on our defenceless frontier—in fact, believing that “if ever a general war should commence along that extended line, conducted with the skill that many of the tribes are known to possess, it would require an army of 30,000 men to prevent them from making inroads upon our settlements,”* the committee are of opinion that no further time should be lost, but that the Government should take immediate steps to provide full armaments for our fortifications; and to supply not only the present and contingent demand for our navy, but

also to furnish field-trains to be distributed throughout the States and Territories, and especially along our whole western frontier; and to accomplish these purposes, the committee are entirely convinced that the establishment of a national foundry is not only appropriate and expedient, but *absolutely necessary*.

In coming to the conclusion thus stated, the committee have been influenced by facts which have been presented to their consideration, not only in the history of our own country, but also that of other governments. History has been well said to be “Philosophy teaching by example;” and though we may not choose to profit by the experience of other nations, we should not neglect the lessons of wisdom which our own annals teach us. There are few nations which have not adopted some *systematic* mode of supplying themselves with arms and munitions of war, and most of them having occasion for ordnance, possess national foundries.* But England, has displayed the most prudent foresight in the establishment of arsenals, depots, foundries, and other military magazines. For such establishments, (says an able and intelligent writer, who has given the fullest and most detailed description of the naval power and military force of Great Britain,) she has chosen fine situations, beyond the walls of cities, where there is space for the erection of regular edifices, extensive yards, and broad avenues—in short, every thing that can conduce to comfort, health, and convenience of those employed about such works.† Generally speaking, the English have sought no decoration for their public works; their chief aim has ever been appropriate ground, and a style of building at once regular and extremely simple; yet the symmetry and vast extent of such edifices awaken those ideas of order and wisdom, of majesty and power, which the sight of grand works, undertaken without a vain love of ornament, and solely for public utility, can never fail to excite. Besides many marine arsenals established near dock-yards, the English have many extensive depots and parks of artillery. The park at Chatham is situated upon the banks of the Medway, and is very extensive; there is also here a magazine of small-arms, of considerable extent. Portsmouth being one of the principal ports of the royal navy of Great Britain, an immense amount of all the munitions of war is kept in depot. Towards the harbor, the park is bounded by quays, where vessels of burden, and even frigates, can lie alongside to land or embark the materials of ordnance. In the space allotted for the artillery, the guns are ranged on cast-iron supporters; and these being solidly fixed, and perfectly level, the guns are moved upon them with great facility; the stores of the engineer and artillery service are disposed in such a manner that they may be embarked with facility at the first moment of need. Besides every species of heavy ordnance, there are light field-trains innumerable, with every species of military apparatus, and all arranged in such complete order, that during the Peninsular War, and that which followed in 1815, the British were enabled, in the space of a few days, to arm and equip the largest fleets and armaments. But Woolwich, since the establishment there of the artillery and royal arsenal, has become the principal depot of ordnance, and every species of the “materiel of war.”‡ Woolwich is situated on the southern bank of the Thames, which is about three quarters of a mile wide; it is eight miles from London, and its proximity to the Park, at Chatham, is such, that a vessel can drop down the Medway to Sheerness, and sail up the Thames as far as Woolwich, in a single day, or indeed in a few hours, by the employment of steam. The military and civil

* See Commodore Patterson's letter, No. 24, Appendix. Also No. , Appendix.

† See Dupin's Military View.

‡ See Dupin's Military View.

* See report of Secretary of War, 25th Congress, 2d session.

branches of ordnance were established at Woolwich at the accession of George I. In time of peace, the arsenal is the grand depository of naval ordnance, where the guns of most of the ships of war are laid up. It contains, also, extensive collections of military machines and models. The arsenal comprehends about sixty acres, and contains the foundry, boring-mills, workshops, and laboratories for making cartridges, grenades, rockets, &c. The foundry for casting cannon is provided with suitable furnaces, forges, boring-mills, workshops, &c. The number of artificers and laborers employed during peace is nearly 2,000, and double that number in time of war. The whole establishment is divided into four principal departments, such as the laboratory, artillery, carriage, and model departments, each under the care and keeping of an appropriate staff of officers and artificers, and the whole under the superintendence of a master general of the ordnance.

"The director of the artillery department, who is called inspector of artillery, is a general officer, charged with the duty of examining all the *materiel* manufactured by contract, beyond the precincts of the ordnance establishment. *He is likewise intrusted with the proof of ordnance, and the foundry of iron and brass cannon.* Assistants for inspection, clerks, and proof masters, are the principal persons employed under his orders; independently of their fixed salaries, they receive a certain rate for the different proofs of arms. The foundry of iron cannon is carried on by contractors, beyond the establishment of the ordnance; but the brass guns are all cast in the arsenal at Woolwich. Since the regular establishment of the foundry service has had its inspector, this important branch has made an astonishing progress in England, both with regard to the properties of guns and the perfection of their castings, &c. In 1797, (which was the period when the change took place,) of 3,654 pieces of cannon presented for approval, more than twelve per cent. were rejected, either on account of defects of shape and casting, or from having burst in proof. In 1810, (that is to say, 13 years after,) the severity exacted in proving cannon had produced effects so beneficial upon the process of fabrication, that of 5,109 pieces presented, there were not found four per cent. which were necessary to reject. The India Company, and merchants fitting out armed vessels, also prove their cannon at Woolwich.†

Of late years, the object of the different Powers of Europe has been to reduce the weight and magnitude, and to increase the number, of their cannon; and to such an extent has this been carried in England, that notwithstanding the immense supplies furnished to her armies and allies, during the French wars, there were in the arsenal at Woolwich, at the time the Emperor Alexander visited it, after the battle of Waterloo, nearly forty thousand pieces of ordnance, including only cannon, carronades, howitzers, and mortars.‡ During the wars with France, there were as many as 2,400 axletrees, and the same number of pairs of wheels, made at Woolwich annually. In the course of the three years, 1808, 1809, and 1810, the carriage establishment employed 14,000 cords of timber. It was customary to be provided with such a quantity of wood, in store, as might be calculated to last for two years to come. The iron used amounted annually to between 3 and

* In like manner, all the gun-barrels are fabricated by contract at the national armories at Harper's Ferry and Springfield, under the direction and supervision of master-workmen. The workshops, tools, materials, in fact every thing that can ensure uniformity and the best manufacture, being furnished by Government, and a certain contract price being allowed for such only as stand the test and proof to which they are subjected.

† Dupin's Military View, vol. 2, p. 288, 289.

‡ See Edinburgh Encyclopedia, article Ordnance.

400 tons. In 1809 it required 870 artificers to execute the work in the carriage department; and the charge for labor alone in one year, was £52,526, without including the pay of master workmen and officers.* By a report made to Parliament in 1817 it appears, that besides the great number of field-trains furnished the allies, the number of small-arms furnished by Great Britain to the allies and to the national troops, from 1803 to 1816, inclusive, were:

To the allies,	-	-	2,143,643
To the regular troops,	-	-	349,882
To the regular militia,	-	-	59,405
To the local militia,	-	-	151,969
To the volunteers,	-	-	307,583
To the navy,	-	-	215,233

Total, 3,227,715

By the report of the Minister of War, it appears that the fire-arms fabricated in the manufactories of the French Government, and made disposable for service, from 1803 to 1814, were no less than 3,956,257.

To show how necessary it was to have a superabundant supply of arms in readiness, it is said the English lost at one blow 60,000 muskets which had been sent to Dantzic; and 100,000 more were lost in a single shipwreck.

At the commencement of the late war, the muskets belonging to the United States are supposed to have been 200,000, and 60,000 were manufactured during the war. At the close of the year 1814, scarcely 20,000 stands remained in the arsenals, and great efforts had to be made to procure a supply. "Had the war continued another year," says the report of the Ordnance Department, "the deficiency of arms would have occasioned the most embarrassing consequences."

The Committee do not deem it necessary to go into a detail of the operations of all the great Powers of Europe; suffice it to say, that every government which aims to keep its place in the scale of nations, strives to keep pace in the improvements that are progressing; and science is made not only the handmaid of the useful arts, but is continually engaged in perfecting every engine and implement of destruction which can be used in war. By the skillful labors of scientific men, the art of gunnery has been brought to great perfection; but, not satisfied with the knowledge attained, they are continually making experiments to ascertain the best quality and combinations of metals; the best mode of casting; and the best form and model for cannon, which can be used with the greatest celerity and convenience, and yet give the greatest effect to projectiles.

In the paper already referred to (marked C) will be found the opinions of many of the most distinguished soldiers and statesmen who have filled the highest offices under our Government, in all of which the strongest arguments are advanced why the Government should adopt a systematic mode of national defence.

The early recommendations of Washington were not more the dictates of wisdom than the result of experience. At the commencement of the Revolution, when the people of this country arose in vindication of their liberties, they were nearly destitute of arms. At the call of their country they rushed from the mountain, valley, and plain, armed only with fowling-pieces, instruments of sport, and often with the mere implements of husbandry; during the whole struggle for independence, they depended for arms of every kind almost entirely upon France, or upon wresting them in battle from the enemy. No patriot bosom but glories in the heroism of their conduct, but humanity weeps over the account of their trials and their sufferings. It was a knowledge of the distresses incident to a want of a supply of arms,

* See Dupin's Military View.

during the eventful scenes of the Revolution, that induced General Washington, early in his administration of the executive department of the Government, to call the attention of Congress to the necessity of establishing national foundries for the fabrication of arms. In pursuance of his recommendation, two factories were established for the purpose of making small-arms—one in Springfield, Massachusetts, the other at Harper's Ferry, Virginia. In submitting the plans and estimates for the works, General Knox, the then Secretary of War, said: "Economy and experience may even increase the profit, especially when the proposed apprentices should be rendered expert workmen; but were there no profit at all, but a loss incurred, it is humbly conceived that an institution of this nature, by disseminating the knowledge of so valuable an art, would, in a just political view, amply compensate the expense."

How fully the views of the soldier-statesman have been verified our experience demonstrates. Although the mechanics of this country had much less experience in the manufacture of fire-arms than those of Europe, yet, by the power of native genius, and the improvements elicited by the experiments authorized by Government, great success was soon attained; and we now have two factories which make the best rifles and muskets in the world.

The most experienced transatlantic officers and artisans admit that the muskets and rifles now made in the United States are superior, in point of finish and usefulness, to the best made in Europe. So perfect and improved has been the system adopted in our factories, that we have accomplished what a board of French officers pronounced a desideratum that was impossible; they thought that it was impossible so to make a musket that a part of the work made for one would suit or fit the residuary part, made in another shop or factory, and by different hands; that the springs or screws, made to suit a given lock, could be made with such uniformity and precision as to answer for the corresponding parts of a different lock; if part of a musket was lost or injured, there could not be taken a similar part of another, and make it quadrate with all its uses; but that the aid of a mechanic must be employed or the musket be discarded. Such is, or has been, the fact with the arms made in France, because the filings of the various parts are regulated chiefly by the eye. This is not the case in our national factories. The system of machinery is reduced to such perfection that every part of a musket or rifle is made with such nice precision and accuracy that every screw or spring, made for a given part or purpose, will fit every musket or rifle that is made in each of the public factories. Take any part of a musket made in the Springfield factory, and it will be precisely, in every particular, like those parts made at Harper's Ferry. All the parts of two muskets may be taken asunder, though one be made at Harper's Ferry and the other at Springfield, and thrown into an indiscriminate mass, and there may be taken from the heap thus blended, at random, the component parts of a musket, and these put together, and the musket thus formed will be as perfect as precision can be, altho' half the musket be made at one factory and the other half at the other. The chief of the Ordnance department has frequently tried the experiment with success. Hence a musket or pistol made in the public factories of the United States is almost indestructible, for, from the fragments of arms on a battlefield, a musket can readily be put together as perfect as when first made.

The improvements made in the rifle are still greater. The common rifle can be loaded and discharged but twice in a minute, whilst Hall's rifle, made at Harper's Ferry, which receives the load at the breech, can be loaded and discharged eight times in the same space of time.

These vast improvements in the construction of machinery and in the fabrication of small-arms are owing to the fact of the Government having established factories under the management of their own officers and agents, and authorized the trying of experiments which have resulted not only in making valuable improvements, but also in greatly reducing the cost of the manufacture. Might we not expect similar, and as highly beneficial results in the improvement of the materials, and in the fabrication of cannon, if the Government had a foundry of its own? Might not the Government, instead of depending upon its present precarious and limited supply secure the nation against any and every emergency by the establishment of a national foundry? The committee conceive there was no argument for the establishment of manufactories of small arms which will not apply, with greater force, to the establishment of a national foundry for the fabrication of cannon and other ordnance; and they believe similar beneficial results would be the consequence.

The committee have sought information from sources which they deemed entitled to consideration, and they take leave to refer to the accompanying letters as chiefly embodying the strongest and most conclusive reasons for the establishment of a national foundry. It will be seen that a general opinion is entertained, among those who have been consulted, of the necessity, as well as policy, of a national foundry, and though some consider it impolitic that such an establishment should at once supersede the foundries now worked by individuals, it is nevertheless admitted that one of a national character should be on a scale, if not sufficient to meet the immediate wants of the Government, at least sufficient to regulate the mode, quality, and manner of the supplies of ordnance required; and especially capable of being so expanded and enlarged, as to meet any and every emergency.

In the report of the Secretary of War which accompanies the President's message, that officer states, "The existence of our own armories enables the Government to establish a standard of comparison, to which the private manufacturers are compelled to conform, and secures the acquisition of good arms at equitable prices. With the same view, the establishment of a national foundry has been frequently urged and is again recommended." "It is not intended," he says, "that it should, at once, furnish the amount of cannon and projectiles required; but it would enable the Ordnance department to make the necessary trials and experiments, so as to determine the proper mixture of metals, to combine the greatest strength with the greatest lightness, and produce the most perfect models; this would secure, at all times, a sufficient supply of arms at the fairest prices."

The committee would not desire to see the present system of obtaining supplies of ordnance suddenly abandoned, so as to bring to ruin, or involve in serious losses, (if this were possible,) those individuals who are at this time employed by the Government; but the immediate establishment of a national foundry, in the opinion of the committee, is too deeply connected with the common safety and defence of the nation, too imperiously called for by the public necessities, to allow any seeming interference with private establishments to justify its being made on any other scale than a due regard to the public interests demands. The committee, in reference to this point, would take leave to refer to the accompanying paper, (marked D,) being a letter from the late Mr. Foxall to the Secretary of War, at a time when it was proposed to establish a national foundry in the District of Columbia.

It will be seen that, so far from complaining of a national foundry interfering with his rights, or doing him injustice, he acknowledged its necessity, and was willing to lend his aid in its establishment, though it went to supersede, and throw out of Go-

verment use, his own works. The committee have also appended to this report communications received from the proprietors of several of the foundries now employed by the Government, in which opinions of the advantages of a national establishment, as also objections thereto, and arguments against its apparent necessity, are given with great frankness, and urged with all the force the subject admits of.

Foundries owned wholly by individuals may, at any time, be placed beyond the reach and control of the Government; and, in time of war, or any sudden emergency, even the case might occur that the secret agents of an enemy, or of a foreign Power, might obtain the control or ownership, and then close them against the government itself. American citizens could scarcely be found so sordid and so base as to concert or connive at such a procedure; but still it might be done while their works are open to contracts, when profit is their object, and the party contracted with is unknown or unsuspected. But, setting aside the possibility of private foundries being placed beyond the reach or control of Government, either by the secret operations of an enemy, or any other cause whatever, they are inadequate to supply the emergent wants of the nation; and, with all good faith on the part of the proprietors, with all their exertions to meet their engagements, with the most liberal advances on the part of the Government, with profitable terms of contract, with sure and certain reward for their labors, they could not, for years to come, furnish all the ordnance now required. The committee do not intend to express any comparative preference between the four private foundries which have been supplying ordnance, under contract with the Government; they have generally withstood the test required, as will be seen by the papers appended to this report, (No. 17,) giving the report of the Penn foundry, and the report of the Colonel of Ordnance.

In cases of pressing necessity, the proprietors of private foundries have it in their power to dictate their own terms; and at all times self-interest will make them more solicitous to enrich themselves, by doing the work as *cheap* as possible, than to benefit the public by furnishing the best article, regardless of expense. Besides, however definite and rigid the regulations of the Ordnance Department may be, as to the form, dimensions, and quality of the castings contracted for, it is impossible to guard against many difficulties. The superiority of some metal over others, the known difficulty of construction, the predominant interest of individuals to furnish the cheapest article, will, besides, always leave a doubt in the minds of those who are to use them, even though such ordnance should have stood the ordeal of proof. Private individuals have not a sufficient inducement to procure the best materials, and to try experiments essential to fabrication of cannon of the best quality; nor can it be expected from individuals, however patriotic they may be, that they will expend largely their private means in testing unprofitable experiments, in combining and testing the strength of various metals, for which the officers of the Government are not authorized to reimburse them. Neither is it to be expected that private individuals will provide and keep on hand the large amount of materials which the necessities and exigencies of the nation may require. It is no argument in favor of the present contract system, "that it is more economical, because the loss upon the rejection or bursting of a gun, falls upon the contractor." The price paid must necessarily cover any contingent loss, or it would be a losing business to have been so long continued. The prices paid for cannon and other ordnance at this time vary very little from the charges made for the same description of articles at any period subsequent to the Revolution; and if private foundries, which have so long furnished the Government with ordnance, had not been profitable to their owners, it is presumed they would have long since been discontinued or converted

to other uses. If they have been profitable, all the gains of the contractors would have been saved to the Government, and the nation would not now be in the present defenceless and dependent condition. As to the experiments being made at such establishments, under the supervision and authority of officers of the Government, such a procedure involves so many difficulties, that the attempt thus to introduce improvements in the manufacture of ordnance would be worse than useless. As different kinds of metal are used, and a different process of manufacture employed at the different establishments, what was found to be an improvement at one, might be detrimental at another. A successful scientific experiment, introduced in the fabrication of ordnance at one foundry, might fail, when tried by different artisans and workmen at another; and thus questions which had cost much labor and expense in their investigation, would, instead of being settled on fixed principles, be involved in additional doubt and perplexity. The principal operations in the fabrication of cannon consist in the modelling, fusing, and casting of the metal, in the boring, and piercing of the vent.* To accomplish all these requires not only the skill of manipulation, which results from practice, but a knowledge in mechanics, mathematics, chemistry, metallurgy, and various other branches of natural philosophy. Without the union of these requisites of knowledge, a founder can establish no certain rules in his process, nor communicate them to others. By long practice, he may acquire a certain degree of perfection; but there he must stop. If a mere mechanic, only directed in his operations by the mere habit of practice, any improvements made by him must be the result of accident, rather than of experimental philosophy, which can alone establish fixed principles. Instead of seeking to impart his knowledge to others, and, by disseminating his information, increase the number of good workmen and skilful artisans throughout the country, he will conceal his operations with as much mystery as he does those of his profits.

A national foundry, on the other hand, under the sole control of the Government, and the management of scientific officers, would not only secure an ample supply of ordnance against any and every emergency, but would produce uniformity and great improvements in its fabrication; while at the same time, it would, by liberal compensation, draw together the best artisans, foster and encourage native genius, and, in a little while, produce experienced workmen in every branch of a business upon which the public welfare too much depends to admit of any contingent want whatever.

A distinguished author† says: "It is an undoubted fact, that no contrivance of human ingenuity ever arrived at any pitch of perfection till after having passed through several gradations of improvement. What is there, indeed, so excellent as to be beyond the power of amendment?" Hence it would be pre-eminently useful to the service, if every officer made, and were permitted to make, experiments, under certain restrictions, and received for each remarkable invention or beneficial improvement a suitable reward. There is apparently an absolute necessity that all experiments should be made according to certain rules, with which every officer, to derive the most profitable consequences from his endeavors, must be thoroughly acquainted. These rules should be laid down pursuant to the actual results of practice. In making experiments, the effects given by theory ought never to be trusted, but such as are verified by practice; and first experiments should at no time be taken as exact, particularly if private interest, the skill of men, or the aid of human power is concerned. Prejudice should never be permitted to affect the judgment of the experimentalist; nor

* See Toussard's Artillerist's Companion.

† Muller, on the Science of War.

private interest, pique, or malice, to prevent the result obtained; which will be best prevented by ordering all public experiments to be made by men equally scientific, equally expert, and equally acquainted with their respective duties.

Another writer, who, from long experience and observation, was well qualified to bear testimony, says; "So long as Government shall depend on private foundries for its supplies of ordnance, those charged with the duty of inspecting and proving cannon have merely a mechanical duty to perform, requiring little aid from scientific attainments. The usual visits and proof will only enable them to ascertain whether the pieces are sufficiently strong not to burst, that they are of prescribed form and dimensions, and free from apparent defect. They will have performed their duty by strictly adhering to the regulations prescribed for the proof, and must be governed, in admitting or rejecting a piece, according to the terms of the contract. How much more advantageous to the service and honorable to the officers would it not be, if, instead of merely determining whether the guns be constructed conformably to regulations and the terms prescribed, he should possess the authority, with scientific knowledge and practical skill, to decide whether, before the metal was run into the mould, the necessary precautions had been taken to avoid all separation between the metallic particles capable of producing an unequal resistance; whether the tenacity of the metal was proportioned to the thickness of the piece, and its hardness sufficient to prevent orbicular cavities being formed in firing very large charges, and to state the reasons which govern his decision; to propose the means of correcting the faults which he has discovered, to offer his reflections on the causes of the defects, and his ideas of the mode of improvement."

The qualities requisite in gun-metal, according to the best authorities, are, "that it possess sufficient cohesion; that it be sufficiently compact; that it be hard enough; and that it be proof against quick and constant firing." In Europe, the most thorough researches and experiments have been made to discover the best combination for these purposes; the results are, that the addition of copper, in a composition of metal renders it more malleable and softer. Tin has a contrary effect, and renders it more brittle and harder. Thirteen pounds of tin to one hundred of copper, produce a good composition for guns. A scientific English author* states, that, "by combining with iron five per cent. of copper, cannon can be made which will sustain one-fifth more gradual pressure by percussion, than when made of iron alone"—an improvement of the highest interest and importance, but which has not been tested or made available in the United States, simply for the want of opportunity, which a national foundry can alone afford. For field cannon, it is of the greatest importance that they should be constructed as light as possible, with due regard to strength. Light artillery would be perfect if the guns could move as rapidly as the fleetest cavalry, and follow without retarding it in any of its evolutions. This will be effected whenever the horses drawing the pieces shall not be more impeded on level and firm ground than those that carry a trooper with his arms and field equipments. It is a settled principle, well established by experiment and practice, that "*ore of the most tenacious quality is the best for iron guns.*" Forged or bar iron is the metal in the highest state of perfection which it can attain. Crude iron carried to the furnace, and again disengaged of another portion of oxygen by its combination with charcoal, ceases to be fusible. In that situation it is subjected to the heavy tilt-hammer, the repeated blows of which drive out all the parts which still partake of the nature of crude iron, so much as to retain the fluid

state. The iron is then malleable, ductile, flexible, and is called forged iron, or *iron of affinage*. From the form which iron receives in this operation, its substance is much altered. In its crude state it was fusible, brittle, and very hard; after the affinage, it is no longer fusible. The most intense heat can only reduce it to a clammy substance. It is soft, malleable, and, either cold or hot, can be flattened or attenuated into wire. The science of the refiner consists in constantly agitating the melted mass, in order to make every part of it often feel the action of charcoal; to keep it divided, in order to multiply these contactions; not to raise the metal in the current of the bellows, and especially not to expose it in the direction of the air, which would oxidate the iron, and produce quite the reverse of what it is proposed to accomplish. All kinds of charcoal are not equally proper for the operation of affinage. The forests which supply the celebrated Swedish iron-works are of fir and pine trees, and the superior quality of their iron over the French and Spanish iron is attributed to this circumstance; for the only difference which can be perceived in the analysis, is, that the Swedish is more disengaged of oxygen, which renders it more malleable, and more yielding to the file.

The United States have, in many situations, the same advantages as regards wood for charcoal, and there is every thing to encourage the hope that the products of our own mines, smelted by means of modern improvements in the construction of furnaces and the application of the blast, and elaborated by machinery which American ingenuity has introduced, will soon surpass that of any other country. In the report of the general convention of the friends of domestic industry, which assembled at New York in October, 1831, it is stated that there were at that time 239 furnaces and forges known to be in operation in the United States, employing 25,000 men, making 112,866 tons of bar iron, and 191,536 tons of pig iron, annually; in value estimated at 13,329,760 dollars. With such abundant supplies, what country could make better trial of forged iron in the construction of cannon? Of all metals forged, iron combines in the greatest degree, tenacity and lightness, (the reason why it is used for small arms,) and, consequently, might well answer for cannon. A distinguished artillery officer,* who served in the Revolution, and was a long time inspector of ordnance, and from whose works the above facts are principally taken, states that, in the Salisbury Keeptryst,† and many other mines in the United States, ore is found which is not inferior to the best English ore, and that the forged iron made from such ore might be advantageously used in the fabrication of any kind of ordnance. He strongly recommends that field pieces should be made of forged iron; since, to every brass four or eight-pounder brought into the field against our armies, forged iron twelve and eighteen-pounders might be opposed, and still preserve the advantage of lightness. That an army which could avail themselves of guns of increased calibre, or heavier balls, against smaller guns of equal weight, but lighter balls, would possess immense advantages, cannot be doubted; and the importance attached to having the guns capable of throwing larger shot is illustrated by the historical fact, that, notwithstanding the superiority which the English six-pounder possesses in facility of mobility, the British themselves substituted nine pounders in their place in the campaign of 1815 against France. The light six-pounder suited Spain and Portugal, where the country is mountainous; but as soon as the army entered Belgium, and had a flat

* Colonel Toussard.

† This valuable "ore-bank" is now the property of the United States.—See report of Secretary of War, No. 30, Appendix.

*Tredgold.

country for their operations, the nine-pounder was preferred, being more effective. The military events of the "hundred days" proved the excellence and foresight of the measure.

By the establishment of a national foundry, not only would every opportunity be afforded to make experiments and tests, and thus produce cannon, the best that science could invent or art perfect, but uniformity would be attained; the importance of which is insisted upon by every officer of both army and navy. Military writers* say, that invariable rules should be laid down for the fabrication of all kinds of artillery and projectiles. The calibre of cannon should be precisely determined, and directions given which should not be deviated from. A government should have the calibres of its cannon so distinct that there could never be any confusion on the subject; that is, the guns should never be so nearly of the same calibre as to occasion mistakes, or the loss of time, which is irreparable in battle. Economy should in this be laid aside; and, however great the expense, the guns and shot should be recast and formed to an established standard.

The advantages resulting from *uniformity* in the parts of small-arms have been pointed out, as evidenced by the perfection to which the factories at Harper's Ferry and Springfield have arrived. In England, the greatest attention is paid to the *uniformity* of their ordnance; and the construction of carriages for the different species of artillery is considered of no less importance than the construction of the pieces themselves. It is not only necessary that a piece of ordnance should be most effectual with the least quantity of materials, as regards its own projectile power, but it is also requisite that it should be so supported, adjusted, and arranged, as to have its fire repeated the greatest possible number of times in a given interval, and that it may be directed, removed, and transferred from place to place with the greatest facility; and when we consider the enormous mass of some of the larger ordnance, and the very considerable weight of some of the medium pieces, we may be convinced that much scope is given the practical artillerist to construct carriages that shall possess advantages peculiar to the service for which any proposed piece of ordnance is intended, and that the subject, in a military point of view, is of the greatest consequence. The uniformity observed in the British manufacture has been carried to such a degree of perfection, that in the construction of carriages, not only the whole of every complete carriage for any specified piece has the same weight and dimensions, but the several parts of the same, from the largest to the most minute, only differ from each other in the smallest possible degree.† In France, too, the advantages and importance of establishing *uniformity* in the fabrication of ordnance have been fully demonstrated. Before the time of Napoleon, every arsenal had its different plans and proportions, so that pieces nominally of the same calibre seemed to belong to different nations, or to be intended for different purposes; this created the greatest confusion, and especially in battle, when trains of artillery were collected from different places. The genius of one man, however, brought order out of chaos, by the establishment of a system of *uniformity*, under such strict regulations, that in a little while precision in all parts of the gun and carriage was carried to the greatest degree of perfection.

The crossing of the Alps by the French army is the most striking instance of the advantage which may be derived from a system of *uniformity* in the construction of artillery. For many ages, the timid contemplation of those mighty barriers had ranked Hannibal's heroic expedition across and down their incommensurable heights and abysses among the fa-

bulous wonders of antiquity. To Napoleon it was reserved to excel even the exploit of the Carthaginian; and the traveller is lost in wonder and astonishment, who traces the steps of the "young hero" where he crossed the Great St. Bernard with one hundred thousand warriors, and, like the dark clouds which he met on its summit, surcharged with lightning and thunder, burst, with overwhelming desolation, on the fair provinces of Italy!

The wish of the First Consul was to make a speedy conquest of Italy, by falling suddenly on the Austrians, and attacking them, unawares, from all the openings of the Alps, through most of which, the artillery, with more or less trouble, might have followed the army. But it was generally believed that the Great St. Bernard presented an insuperable obstacle. The passage was but little known, and the success of the undertaking forbade both reconnoitring and the employment of pioneers. It appeared, at first, impossible to transport the ordnance across the mountains; but the artillery was dismounted piecemeal. The iron parts were packed in boxes; the wheels, timbers, axletrees, beams, cheeks, and transoms were separately carried on poles or dragged on sleds. The trunks of fir trees were hollowed out into troughs, and the cannon secured in them, and drawn up the hitherto inaccessible heights, by hundreds of men, according to the difficulties to be overcome.

The exertions of a whole battalion were necessary to carry up a single gun; but, encouraged by the animating voice of their young leader, the task was accomplished; and, from the top of the highest glacier, the pieces were let slide down the declivities, amid the shouts of the whole army!

The result is well known, but its success was owing to the system of uniformity which had been introduced into the construction of the ordnance, by which alone the pieces were capable of being taken apart, "piecemeal," and afterwards refitted and readjusted without the slightest difficulty or confusion, even in the presence of the enemy.

But, besides the advantages which would accrue by the establishment of a national foundry for the manufacturing of ordnance, there are other considerations which equally demonstrate its importance.

The improvements which are daily making in the application of steam as a motive power, and the complete success which has attended its experimental application to all the purposes of sea-voyages, must necessarily produce important results. The whole maritime world will be more or less affected by these changes; and every nation engaged in commerce, or pretending to maintain her rank, will have to call to the aid of her naval service steam-vessels of every description, from the lightest boat to the heaviest steam-battery.

To meet the changes in naval warfare which must inevitably ensue, and especially to provide for the defence of our own coasts and harbours, a large supply of engines, boilers, and machinery will speedily have to be provided; and in the opinion of the committee, this can be affected in no way more effectually than by the establishment of a national foundry, with a capability of being enlarged, should the increasing requirements need it.

From a consideration of all the foregoing circumstances, the committee are entirely convinced that the establishment of a national foundry is not only appropriate and expedient, but *absolutely necessary*.

The next questions which arise are. Upon what scale should such an establishment be made? and where should it be located, best to subserve the public interests, and to secure, in the greatest degree every possible facility for the national defence?

The principal objects to be attained by the establishment of a national foundry being to afford every facility for making experiments in the manufacture and efficiency of all kinds of ordnance; to test the

* Muller, Toussard, et alii.

† Dupin's Military View.

qualities of various metals, and their combinations; to establish a strict uniformity in the quality, size, and dimensions of guns and shot of every particular calibre; to make the country independent, and secure it against any emergency; to provide as speedily as possible for the common defence, by furnishing our forts with proper armaments, our navy with the most perfect cannon, and each and every State and Territory with a due proportion of field-pieces, the committee are of opinion that a foundry, to be national in character, and to be adequate to all the purposes proposed, should be established upon a liberal scale. It is not to be expected that a national foundry, sufficiently extensive and powerful to supply all the wants of the service, can be brought into operation for several years—nor is it necessary; but to effect any useful purpose, and to enable the Government to increase its supplies upon any sudden emergency, judicious provision should be made in the beginning as to the extent and eligibility of the site and the plan and arrangement of the works. The site should be sufficiently extensive, not only for the present purposes, but for all future operations; for, according to the report of the Ordnance department, "the limiting of the purchase of land for public works to a small quantity, and barely sufficient for the purposes immediately contemplated, has, not unfrequently, proved greatly disadvantageous to the public interest."

It is a well-known fact, that, in almost every instance, when an additional quantity of land has been required for forts, arsenals, navy yards, and other public purposes, such new purchases have cost more than the original ones. The site of a national foundry should be sufficiently extensive, not only for all the necessary buildings, furnaces, forges, boring-mills, storehouses, workshops, depots for patterns, models, castings, yards for wood, coal, sand, clay, and ore, but sheds for manufactured ordnance, and especially such ample space as is necessary to make the various proofs and experiments to ascertain the range of guns of different calibre and the effect of all kinds of projectiles, at various distances. The site should possess a power sufficient to drive all the necessary machinery, and be available for various uses. This power should be constant, not liable to failure from any cause, ample to meet any contingent demand, and should, unquestionably, be that of water. In particular situations, where fuel is superabundant, steam-power may be used; but it requires a complex machinery for its production, and is at all times liable to accident and interruptions; its economy, under the most favorable circumstances, depends on the extent to which it is applied, or the number of engines it puts in motion. For purposes which will admit of a concentration of power, when a single engine can be used, and when fuel is cheap and at command, it may be as economical, though not so safe, as water-power; but when the power required is auxiliary to the labors of man, and is necessarily distributed through several separate departments or works, water power is not only the most convenient and available, but the safest and most economical.

As to the extent, plan, and arrangement of the buildings, they should be so extensive as at once to be put into useful operation, and so capable of furnishing supplies of ordnance as to make it worth the superintendence of the highest officers of the Ordnance department, and sufficiently important to authorize the employment of the best and most skilful artisans; while in their plan and arrangement they should be such as to admit of any enlargement that the public interests or necessities may at any time hereafter require. The works should be so located that ample and convenient space should be allowed for their enlargement by the erection of additional buildings, so that the same great water-wheels, the same propelling and gearing machinery, the same

furnaces and forges, railways, and locomotive engines, could be used as well for the new works as for the old.

The question of location, or where the foundry should be established, so as best to subserve the public interest, is, in the estimation of the committee, of the utmost importance. Its location should be as central as possible to all portions of the Union; sufficiently far from the coast to be secure from the sudden incursions of an enemy, yet having the facility of water communication with our chief forts, fortifications, dock-yards, and naval stations, where the heavy ordnance will be required, together with an equal facility of inland communication, by means of canals and railways, to furnish supplies of ordnance to the interior and frontier States and Territories; while, at the same time, its location should be such as to afford the readiest and cheapest means of obtaining supplies of stone-coal, charcoal, iron, clay, limestone, and other materials.

It appears that an inexhaustible supply of metal of superior quality, which has been tested for a long series of years in the fabrication of cannon, may be obtained not only from works owned by individuals, but from ore-banks belonging to the United States.

By the report referred to, and which was made to Congress on the 31st January, 1821, in compliance with a Resolution of the House of Representatives, calling for "a list of all the lands and buildings which have been purchased by the United States for military purposes," it further appears that the United States have the right of cutting wood and timber from an extensive tract of land, situated on the Potomac, in Virginia, about sixty miles from the District of Columbia, which was purchased August 20, 1813, for the sum of \$20,860 62.

By the papers which have been submitted to the committee, as well as from the information obtained from the documents already referred to, it appears that there are a number of situations in different parts of the Union, all having relative claims to preference. Strong arguments have been advanced in favor of different locations by officers of high professional character, and others, alike distinguished for their practical knowledge and scientific attainments.

By a report of the Secretary of War, which will be found in document No. 203, of the second session of the sixteenth Congress, it will be seen that the United States own "iron ore on a certain tract on the river Potomac, in Virginia, near Keepryst furnace, containing about 1,600 acres in which is a bank of iron ore, purchased of Henry Lee, May 8, 1800, for the sum of \$24,000; also a tract in Berkely county, Virginia, called the furnace tract, containing 221 acres, with all the buildings and improvements, including the furnace and mills, with the right of digging ore from Friend's ore-bank, purchased of Wilson, Potts, and North, June 20, 1800, for the sum of \$42,000." These lands are said to have been purchased for the purpose of establishing works for the fabrication of cannon and other military works for the public. The fact of this valuable property being owned by the United States being discovered, information as to its present condition and applicability to the purposes of a national foundry was sought from the War Department. In reply to this call for information, the accompanying papers (marked No. 31, C, D, and E,) were received by the committee. As to the quality of the iron ore found on the lands above described, and belonging to the United States, the committee submit the following statements: Colonel Toussard (from whose work several extracts have already been given) says: "In the year 1799 the Secretary of War, having heard of the goodness of the metal of several furnaces in the United States, caused several three-pounders to be cast at the Eagle foundry, on the Schuylkill, out of the pigs made at Keepryst furnace, and ordered the author to prove them, which was accordingly done; some of these guns stood the usual proof. They were afterwards

*See Report, April 24, 1823.

mounted on field-carriages, and fired fifty rounds with shot, and were charged as quick as precaution for the safety of the men would admit of, namely, in thirty-three minutes. We have no hesitation in pronouncing that these pieces would answer for field artillery. Had these experiments been continued, and afterwards improved on wrought iron, we have not the smallest doubt but the United States would have had every year a number of field-pieces, made of forged iron, which by this time would have completed the strongest and lightest train of field ordnance. To every four or eight-pounder brass field-piece, brought against them into the field, they could have opposed forged iron twelve and eighteen-pounders, and still have preserved the advantage of lightness." *It is not yet too late.*

Uninfluenced by private interest or sectional predilections, the committee do not feel themselves justified in deciding upon the relative general and local advantages of each particular situation; nor do they believe it would be expedient to designate by law where the national foundry should be established, until an examination be made of the different locations proposed, by such competent and scientific officers in the service of the Government as the Executive may call upon for that purpose.

In accordance with the foregoing details, the committee respectfully report the following bill:

A BILL to establish a national foundry for the fabrication of cannon for the use of the army and navy of the United States.

Be it enacted by the Senate and House of Representatives of the United States of America, in Congress assembled, That the sum of one hundred thousand dollars, or such portion of said amount as may be necessary, be paid out of any moneys in the Treasury not otherwise appropriated, for the purpose of purchasing a suitable site for a national foundry for fabricating cannon for the use of the army and navy of the United States.

Sec. 2. *And be it further enacted,* That the President of the United States may call to his aid such competent officers in the public service as he may deem expedient, to aid in selecting and contracting for a site for such foundry, which site shall consist of not less than sixty acres of land.

Sec. 3. *And be it further enacted,* That such of the officers of the United States as the President may require shall report a plan for a national foundry, together with the cost of all the necessary buildings and materials necessary to carry into useful but moderate operation said proposed foundry; and that said plan be so laid down as to show its capacity for being enlarged whenever the national wants or emergencies may require its enlargement.

FROM BUENOS AYRES.

By the ship Brutus, from Montevideo, sailed December 4th, Buenos Ayres papers to the 26th of November inclusive, are received. Affairs between the French and the Buenos Ayreans remained pretty much *in statu quo*. The blockade had caused a great accumulation of vessels in the port of Monte Video, where there were about 150 sail of foreign ships, and 50 coasters, when the Brutus sailed. The French squadron consisted of 12 sail; one 64, two 28s, two 22s, one 20, three 18s, one 16, one 10, and two of 4 guns.

The U. S. schooner Dolphin and sloop of war Fairfield were at Buenos Ayres; the former from Monte Video, the latter from Rio Janeiro.

There had been a correspondence between Lieut. Mackenzie, of the Dolphin, and the French Admiral, relative to the firing of one of the French vessels into the American barque Madonna, as she was going out of Monte Video. The Admiral made all requisite apology, and arrested the captain of the vessel that fired.

The French frigate Expeditive, composing one of the blockading squadron at Buenos Ayres, is said to have been totally lost, near Martin Grecia, about the 17th Nov. The crew had been saved.—*New York Commercial Advertiser.*

WASHINGTON CITY;

THURSDAY, FEBRUARY 14, 1839.

AN INQUIRY into the Causes of the Rise and Fall of the Lakes, embracing an account of the floods and ebbs of Lake Ontario as determined by a long series of actual observations, and an examination of the various opinions in regard to the late unprecedented flood throughout the chain of great lakes. To which is annexed a letter to Dr. H. H. SHERWOOD, on his Theory of Magnetism. By EDWARD GIDDINS. Lockport, N. Y.

The subject of Mr. Giddins' Inquiry is not merely curious or speculative. "The fluctuations of the Lakes," he says, "formerly attracted but little notice, being deemed scarcely worth a thought; but since the rise of water has begun to affect many, residing on the lake borders, in a pecuniary point of view, the subject has grown to one of much interest, not only to such as are thus affected, but to every one who has a scientific turn of mind." His observations are confined chiefly to Lake Ontario, in the immediate vicinity of which he resided from 1815 to 1827, and had constant opportunities of observing its fluctuations: but the facts, and reasoning as to the causes, will apply equally well to others of the great chain of lakes.

It appears that in Lake Ontario there is a regular annual flood and ebb, or rise and fall in the depth of the waters. They are at the highest stage about midsummer, and at the lowest about midwinter. After the ebb, or fall to the lowest stage, they continue for some time stationary—that is during the winter, from November or December, until March or April. This last fact, that the waters continued at the lowest stage during the season of frost or ice, might, we think, have pointed at once to the true cause of the fluctuation—the interruption of the usual supplies of water to the lake by congelation, and the subsequent restoration of the supplies by the thaw, commencing in the spring and not fully completed until June or July. But instead of adverting to this fact, which Mr. Giddins has pointed out, the fluctuation in the depth of water in the lake has been attributed to various other causes—evaporation, expansion or dilatation of the waters by heat in summer, astronomical causes, and even to magnetism. In discussing and disproving the adequacy of these causes, Mr. Giddins displays an observing and philosophising spirit, and a close mathematical turn of reasoning, which render his remarks well worth perusing. He does not seem, however, to account sufficiently for the fact, that since 1834 the floods in the lake have invariably exceeded the ebbs, so that a consequent yearly rise of the waters has ensued, until last summer (1838) found them higher than they have been known for fifty years.

Appended to the Inquiry is a letter addressed to Dr. HENRY HALL SHERWOOD, of the city of New York on the subject of his memorial to Congress, in which he

professed to have invented an instrument, called the geometer, by which he could determine, by the dip of the magnetic needle, the latitude and longitude of any place on the surface of the globe. This memorial was laid before the Senate, in June, 1838, and referred to the Committee on Naval Affairs, of which Mr. RIVES was chairman; and the committee state in their report, that they "*are fully persuaded that the discoveries and invention of Dr. Sherwood are entitled to the most serious consideration of the public, and to the encouragement and patronage of Congress.*" Mr. Giddins does not hesitate to insinuate pretty boldly, that this application to Congress was a deliberate attempt at imposture: and truly, from the absurdities and inconsistencies which he points out in the theory of Dr. Sherwood, it would seem that the Committee on Naval Affairs were grossly duped, either by design or ignorance. This is the more to be regretted, as it is seldom that a committee of Congress displays such liberality towards projectors; and therefore the severity of Mr. Giddins' letter is not altogether uncalled for. There is at least nothing new in the attempt to discover the longitude by means of the dip and variation of the needle. It was tried by Whiston, about the year 1729, and afterwards by Zachariah Williams, who was for some time supported out of the reward appropriated by the British Parliament, and who published a treatise accompanied by a set of tables of variations, calculated from 1660 to 1860: but his plan was submitted to Sir Isaac Newton, and by him pronounced visionary.

ON THE COURSES OF HURRICANES; WITH NOTICES OF THE TYFOONS OF THE CHINA SEA, AND OTHER STORMS; BY W. C. REDFIELD, Member of Conn. Academy of Arts and Sciences, Corr. Member of U. S. Naval Lyceum, the Albany Institute, &c.

It has been said, somewhat jeeringly, of attempts to subject such proverbially fickle agents as wind and weather, to calculation, that all that we are likely to know of the matter is contained in the verse of Ecclesiastes—"The wind goeth towards the south, and turneth about to the north; it whisteth about continually, and the wind returneth again according to his circuits." The application, made in jest, contains not a little truth; and it is somewhat singular that the germ of a correct theory of storms should apparently be found in a verse of scripture, which is more generally understood in a poetical than in a practical and scientific sense.

The present publication of Mr. Redfield cannot well be understood or appreciated without a reference to his previous papers, (first published, he says, at the suggestion of Professor Olmstead, whose name is itself "a tower of strength;") and also to the treatise on the law of storms, by Lieut. Col. Reid, of the Royal Engineers, in which honorable and flattering mention is made of Mr. Redfield's labors. The subject is one of not a little interest and importance to nautical men, and it is to be wished that our

naval commanders generally would make themselves acquainted with the information and discussions which have already been elicited. The evidence now adduced by Mr. Redfield to show the analogy between the tyfoons of the China sea and the hurricanes of the north Atlantic, is as conclusive as could be expected, considering the difficulty of obtaining correct data and information on such subjects.

With regard to the New Jersey tornado of 1835, Mr. Redfield states, in opposition to Professor Bache, and others, that he examined the track of the tornado a few days after its occurrence, and having twice repeated the examination at later periods, he observed numerous facts demonstrating, besides the whirling character of the tornado, and the inward tendency of the vortex at the surface of the ground, that *the direction of the tornado was towards the left*, as in the north Atlantic hurricanes—a result which he had not previously expected, as it appeared probable that the direction of rotation in these small whirlwinds must be entirely accidental.

An examination of the logs of vessels which have encountered the tyfoons in the China sea—and of information contained in the English paper published at Canton—shows that the tyfoons are progressive whirlwind storms, turning to the left about the axis of rotation, moving in a westerly or northwesterly direction, at the rate of about seventeen nautical miles per hour, and not controlled or materially influenced in their direction by the existing monsoons. The diameter of the typhoon in 1835, in which the British ship of war Raleigh was capsized, was about 400 nautical miles, or equal to six or seven degrees of latitude. A remarkable fact in the character of these tempests is the fall of the barometer which attends them, and which Mr. Redfield attributes to the rotative action, the point of greatest depression of the barometer indicating the true centre or axis of the storm.

At the close of this tract, Mr. Redfield remarks: "It will be found difficult to reconcile with the received theory of winds the facts which have claimed our attention while pursuing this inquiry. To me it appears that the courses of the great storms may be considered to indicate, with entire certainty, the great law of circulation in our atmosphere; and that the long cherished theory which is founded upon calorific rarefaction must give place to a more rational system of winds and storms; founded mainly upon the more simple conditions of the great law of gravity." Many will probably think that this is going too far; nor do we, (only partially informed,) see the necessity of getting rid so summarily, or at least *in toto*, of this "long-cherished theory," which is based upon an indisputable truth and principle. At all events the foundation must remain, though the superstructure should be proved to be faulty; and in discussing any theory of winds, it would seem absurd to reject all consideration of "calorific rarefaction."

FLORIDA WAR.

*Correspondence of the Army and Navy Chronicle.***CAMP AT FORT BUTLER, January 17, 1839.**

SIR: As the friends of officers are always anxious to hear of their location, I will give you a list of those present at this place under the command of Lieut. Col. Fanning. We have been here but a short time, and hourly expect orders to move. The following is accurate, I believe.

Lieut. Col. Fanning, commanding; Dr. Stinnecke, Surgeon; Capt. Morris, Lieuts. Freeman, Williams, Pemberton, and Bradford; Lieut. Miller, adjutant to the command—all of the 4th artillery.

Major Childs, Capt. Davidson, Lts. Poole, Mock, Sherman, Mackall, Shover, and Brown, of the 3d artillery.

Capt. Russell, Lieuts. McKinstry, and Woodruff, of the 2d infantry; and Lieuts. Merrill and Sibley, of the 2d dragoons.

Capt. Searle is Quartermaster at this post, and Lt. Darling, Commissary. Lt. Ransom, of the Dragoons, has a detachment of his regiment at the post. Capt. Fulton, Lts. Hardee and Newton, and Dr. Abadie, with a detachment of the 2d dragoons, are at Volusia, directly opposite. Capt. Vinton's company of the 3d artillery was left to garrison Fort Brooke on the Ocklawaha river. Lt. Taylor's company was left half way between Fort Brooke and Fort Shannon, at Pilatka, on the St. John's. W.

GAREY'S FERRY, BLACK CREEK, E. F.,

January 23, 1839.

DEAR SIR: Presuming that any information relating to affairs in this quarter would be interesting to you, I will give you what little news there is stirring. Colonel Fanning's command has returned from its expedition to the Ocklawaha river. Fresh trails were perceived, and evident signs of the Indians having run away at the approach of the troops. The command returned to Fort Butler by way of Silver Springs, and has since been reduced by detaching four companies of the 3d artillery to the south-eastern coast; two companies go to Fort Pierce, on Indian river; the officers of the battalion are—Major Childs, commanding; Lieutenants Poole, Mock, Shover; Dr. Conrad; Lieutenant Sherman, Quartermaster; Lieut. Brown, Ordnance officer.

One company to Key Biscayne, commanded by Captain Vinton, with Lieut. Rodney, Commissary, and Dr. Baldwin. The other companies to Fort Lauderdale, on New river, commanded by Captain Davidson, with Lieut. Mackall and Dr. Hughes.

The companies under Major Childs left yesterday in the steamboat Gaston; the other companies leave to-day in the Santee. Captains Winder and Beall, of the Dragoons, captured fifteen Indians near the Ocklawaha, three days ago; these Indians report that their friends fill the country from Fort Mellon to Black creek, but in such small squads, that it is not difficult for them to find hiding places. Captain

Beall's company of Dragoons arrived here yesterday, on their way to Trader's hill, but has since been ordered back to where the fifteen Indians were captured. I believe Colonel Twiggs goes with them, in this morning's boat. Colonel Twiggs commands on this side of the peninsula, and is a very indefatigable officer.

Nothing has been heard from Sam Jones of late, except the old story of his warriors dying off with the dysentery. Last winter we believed it, but do not now. There is no probability of the war being at an end for some time to come; the Indians seem determined to remain until actually driven out by superior force. This will require a long time yet. The duration of this war, in my opinion, depends entirely on the will of the Indians; they can remain or not, as best suits their caprice, at least for some years.

A wagoner, going from Fort Brooke to Pilatka, a few days since, was shot at by a party of six Indians, and hit by a ball in the breast; he is dangerously wounded, but probably will recover. A detachment in pursuit came up with their camp a short time after, but the Indians escaped into the hammock.

We have had no news from the other side of late; at the last accounts, Col. Cummings, with some of the artillery and infantry, was cutting a road from Tampa Bay to Fort Mellon.

When any thing new occurs, I will immediately let you know of it. A.

U. S. SHIP FALMOUTH, Panama, Dec. 16, 1838.

The U. S. ship Falmouth sailed from Callao, Nov. 29; touched for a few hours at Payta, on the 4th of Dec., and arrived at Panama on the 16th Dec., 1838. The North Carolina, Commo. Ballard, was at Callao when the Falmouth sailed. The schr. Enterprise, Lieut. Com'dt Harry Ingersoll, was also at Callao, to sail for Valparaiso, Dec. 3d. The brig Boxer, Lieut. Com'dt Nicholson, was cruising between Callao and Payta. The Lexington still on the coast of Mexico. Lieut. Com'dt Glendy, late of the Enterprise, came passenger in the Falmouth to Panama, having in charge despatches from the consul at Lima, for the State Department.

Negotiations for a peace with Chili had been opened by Santa Cruz, through Mr. Wilson, Her Britannic Majesty's Chargé d'Affaires; but were rejected by the Chilian Minister EGANA. There is, therefore, no immediate prospect of a termination of hostilities.

The following is a list of the officers of the Falmouth:

ISAAC MCKEEVER, Esq., *Commander*; William B. Lyne, Lewis G. Keith, John J. Glasson, Ferdinand Piper, *Lieutenants*; Edwin J. DeHaven, *act'g Master*; Robert Pettit, *Purser*; William Whelan, *Surgeon*; Charles Wm. Tate, *Ass't Surgeon*; R. M. Harvey, *Passed Midshipman*; S. C. Barney, T. H. Patterson, Richard Allison, Courtlandt Benham, R. H. Getty,

Midshipmen; Henry LaReintre, Captain's Clerk; William Ward, Sailmaker; John Knight, act'g Boat-swain; Daniel James, act'g Gunner; John Rainbow, act'g Carpenter; Elisha Franklin, Purser's Steward.

An officer of the navy, who came up from Norfolk on Monday, informs us that the frigate Macedonian had not sailed on Sunday. The Beacon, of Saturday, states, on the authority of the pilot, that the frigate has been detained by the low stage of the water, there not being sufficient to take her over the shoal places, into Hampton Roads. The Herald, of Monday, contradicts the report, and says that "at all times of the year, and 'stages of the moon,' there is sufficient depth of water in the shoalest part of the river to take the largest ships in the navy to sea." The Herald adds that the Macedonian would sail on Tuesday—the day before yesterday.

Lieut. W. M. GLENDY, late commander of the U. S. schooner Enterprise, arrived in Washington on Sunday last, over land from the Pacific, *via* Panama, Chagres, Kingston, Jam., and New York. Lieut. G. was the bearer of despatches.

The U. S. packet brig Consort, Lieut. Comd't. W. H. GARDNER, will sail from New York for Vera Cruz, on the 1st March.

NATIONAL FOUNDRY.—We are indebted to the Hon. W. COST JOHNSON, chairman of the Special Committee, for a copy of his able Report on the establishment of a National Foundry. Viewing the subject as one of great importance to the country, we have made room for the report, though of much length, at the earliest possible day.

STOMACH PUMP.—Dr. N. C. Barrabino, of the U. S. navy, while a student of medicine in Paris, invented (or rather improved) a stomach pump, which is said to be the simplest and most ingenious of any in use. Dr. B.'s pump was highly approved by M. Dupuytren, and other eminent members of the medical faculty of Paris; and he also received a gold medal for it in Philadelphia.

ARRIVALS AT WASHINGTON.

Feb. 8—Capt. I. P. Simonton, 1st Drags.	Fuller's.
11—Lieut. M. Knowlton, 1st Arty.	Gadsby's.
Capt. B. L. Beall, 2d Drags.	G. Taylor's.
Lt. L. B. Northrop, 1st Drags.	Fuller's.

PASSENGERS.

NEW YORK, Feb. 8, per ship Emily, from Kingston, Jam., Lieut. W. M. Glendy, of the navy.
CHARLESTON, Feb. 5, per steam packet W. Seabrook, from Savannah, Captains W. W. Tompkins and B. L. Beall of the army.

DOMESTIC INTELLIGENCE.

From the Baltimore Sun, Feb. 5.

COMMODORES PORTER AND ELLIOTT.

We received some days since, to which we give publicity, a statement from a correspondent in reference to the understanding existing between Commodores Porter and Elliott. Below we give a letter received yesterday from Commodore Porter, enclosing the accompanying correspondence, which, as

he says, we think will do away all "misconception" in reference to it.

GEORGETOWN, Feb. 3, 1839.

MESSRS. EDITORS: To correct all misconception as to my opinions and feelings at the time I met Commodore Elliott in Baltimore, I send you the enclosed correspondence, which I will thank you to publish with this letter.

With great respect, your very ob't. serv't.

DAVID PORTER.

CHESTER, Dec. 24, 1838.

SIR: I have the honor to enclose to you the copy of a letter which I addressed to Commo. Elliott, occasioned by courtesies offered to me publicly, while I was removing from the Washington rail road cars in Baltimore, to those which come to this place.

I have the honor to be, with great respect,

Your very obedient servant,

DAVID PORTER.

Hon. J. K. PAULDING,

Secretary of the Navy.

CHESTER, Dec. 22, 1838.

SIR: To avoid any misconception as to my receiving and returning any courtesies from you, I have to request the favor, should we meet, that you will consider me as a perfect stranger, until the reports which are in circulation prejudicial to you, are removed by the decision of a competent tribunal.

The reason for making this request is, that I have three sons in the navy, who I am unwilling should think that I treat such reports lightly.

I am, with great consideration,

Your very obedient servant,

DAVID PORTER.

Com. J. D. ELLIOTT.

PHILADELPHIA, Jan. 3, 1839.

SIR: Your note of the 22d ultimo is received. It cannot be more agreeable to you than to myself that our acquaintance should cease.

I am, sir,

JESSE DUNCAN ELLIOTT.

To DAVID PORTER, Esq.

GEORGETOWN, Jan. 6, 1839.

SIR: I have received a note from Commodore Elliott, of which the enclosed is a copy, on which I shall only remark, that the man who is so indifferent to opinion, and so reckless of his own character, is, I should think, an unfit example to the younger officers of the navy.

I have the honor to be, with great respect,

Your very obedient servant.

DAVID PORTER.

Hon. J. K. PAULDING,

Secretary of the Navy.

UNITED STATES STEAM SHIP FULTON.

NEW YORK, Jan. 30, 1839.

To Commo. CHARLES G. RIDGELY,

in command of the Navy Yard, Brooklyn:

SIR: The underwriters of this city have noticed, with great pleasure, your promptness in despatching the U. S. steam ship Robert Fulton, to the relief of the brig Borodino, dismasted outside of Sandy Hook, in the late gales. The efficient services rendered by Lieut. Comd't. West, in bringing the distressed vessel safely into port during the bad weather, and through the quantities of ice then obstructing our harbor, were very satisfactory; and we have to tender you, and the officers and men detailed for that duty, the thanks of the Board of Underwriters, for the aid rendered on that occasion.

We are, with great respect, your obedient servants,

WILLIAM NEILSON

President of the Board of Underwriters of N. Y.

WALTER R. JONES,

Secretary of the Board.

To Messrs. WILLIAM NEILSON, President of the Board of Underwriters of New York, and WALTER R. JONES, Secretary :

GENTLEMEN: I am honored with your communication of the 30th ultimo, tendering to myself, Lt. West, and the officers and crew of the steamer Fulton, the thanks of the Board of Underwriters of the city of New York, for the prompt services of the Fulton in affording relief to the brig Borodino.

As you have requested, I have made known to Lient. West and the officers and crew of the Fulton, the thanks tendered them; and I pray leave to assure you it will always afford me the highest gratification to afford assistance and protection to the commerce of our common country.

I am, gentlemen, very respectfully, your obedient servant,

CH. G. RIDGELY.

NAVY YARD, NEW YORK, Feb. 1, 1839.

THE S. S. EXPLORING EXPEDITION.—A letter received at the Philadelphia Exchange from an officer on board the U. S. ship Peacock, of the South Sea Exploring Expedition, dated Rio, Nov. 23, 1838, says: The Peacock arrived there on the 21st, and the remainder of the fleet arrived on the 23d Nov.—officers and crews all well. All vessels will be overhauled that may require it, and completely fitted out and sail for Valparaiso, the next port they expect to touch at. The officers and crews are in high spirits, and are well supplied with warm clothing, &c., to meet the extreme cold in the South Seas.

MARINES.—We have seen suggestions occasionally thrown out within a year or two past, that the marines are a useless branch of the naval service, consequently can be dispensed with without inconvenience, and thus a considerable amount of annual expenditure saved to the country. We conceive this to be a very unsound and dangerous doctrine, which we hope will never prevail to any considerable extent. The marine is a highly important branch of the naval service, and whatever opinions may be expressed by some of our veteran naval officers, we hope it will never be abolished. It is well known that many acts of insubordination, and attempts at mutiny have been quelled and prevented by the existence of a corps of marines on board ships of war—and their services where crews have been compelled to land and attack an enemy, their superiority in discipline being so great, is well known. To break up the marine corps, would be to give a fearful, perhaps fatal, blow to our young navy.—*Boston Journal*.

The glory of our gallant little navy is so identified with the short but eventful history of our country, that it is impossible to regard it with other feelings than those of love and esteem. In all collisions with foreign powers, whatever reverses of fortune may have attended our brave and patriotic army,—and on some occasions they have been such as to make the heart of every American to experience the deepest regret,—the successes of our ships have been such as to reflect honor on our national banner. Whether we look back to the short misunderstanding with France, in which a TRUXTON gathered unfading laurels; to the Tripolitan war, distinguished as it was by deeds of the most heroic character; or to the late conflict with Great Britain, there appears to have attended our operations at sea a brilliancy of achievement scarcely to have been anticipated by the most sanguine admirers of the prowess of our countrymen. On the occasion last referred to, confident as our countrymen were that in the event of a meeting between our vessels of war and those of the enemy of equal force, all would be done that could be effected under the circumstances, fears were entertained by all lest the long experience

of our antagonists might give them victory. Such however was happily not the case. In the first conflict that ensued, in which our HULL had to contend with the skill and bravery of a Dacres, sustained by the unflinching courage of a gallant and veteran crew, the charm of British invincibility was broken, and the world was taught to know that Britons could be beaten on the waves of which they had claimed the exclusive sovereignty. Subsequent battles in which a BAINBRIDGE, a JONES, a STEWART, a PERRY, and a MACDONOUGH, sustained the honor of the "stripes and stars," gave confirmation of the superiority of American seamanship and gunnery. Even in cases where the results were unfortunate, there attached no discredit to our flag, the circumstances under which they took place being of such a nature as to account satisfactorily for the disastrous issues. Nor did the fate of the Chesapeake, ill omened as it was, tarnish the national fame, the loss of that ship being attributable, as is believed, to accidental causes beyond the control of human foresight; whilst the gallant but unfortunate LAWRENCE uttered in his dying moments a war cry that will cheer the American sailor so long as a national ship shall float. "Don't give up the ship"—were his last words, and they will find an echo in the bosom of every kindred spirit that may succeed him in the service.

Under such circumstances it is not to be wondered at that the navy should have always been the object of the deepest affection on the part of our countrymen. They behold in its wooden walls the protectors of our rights and the avengers of our wrongs. Wherever these floating citadels sustain the flag of our country, the name of American is respected and honored. To those who would regard us as foes they bear defiance, whilst to such as may wish to esteem us as friends they carry the tidings of good feeling and the solaces of unbounded hospitality and humanity. At sea our officers are almost without exception cool, self-possessed and fearless; on shore, urbane, frank and generous. Whilst conscious of their real worth, they exact nothing of their fellow citizens, they receive, as they should do, all that can be desired on the score of deference and respect. Among the greatest ornaments of general society, their presence is courted and their companionship invited, whilst to such as enjoy the privilege of beholding them in the quiet seclusion of the domestic circle, they are examples of strict attention to all the ties of near relationship. Let none then venture to asperse a fame ennobled by all the recollections of our country's existence, and instead of permitting their names to be sullied by ungenerous imputations, let all recognize their worth and protect their reputation from the obloquy which mortified vanity or unjust prejudice may attempt to cast upon them.—*Baltimore American*.

We are highly gratified to find that the idea of employing apprentices in our armed and commercial marine is daily gaining ground. America should not be dependent on foreign nations for sailors, as she must be until we have a supply of native seamen adequate to our wants. Without some such regulation as the one proposed, it cannot be expected that our own countrymen can compete with people from abroad who can afford to serve for much less money, and yet be better off than at home. The evil is not so severely felt during a time of general peace, but it must be borne in mind that should a war take place, each nation will be claiming its own seamen, and then what shall we do for a supply? Our youths are deterred from entering the naval service by the presence of foreigners; consequently our sailors are chiefly from abroad, and when they shall be taken away there will be none to supply their places. There is another reason why we wish to see Americans having the management of our ships. There is a looseness of morals among sailors of other countries

which renders them unfit guardians of our property. Compare, if you please, the seamen on board of our whale ships, the hardy sons of the New England States, with the sailors of Europe generally, and they will be found as superior as one race of men can be to another. The first are orderly, honest and sober, whilst the latter are addicted to every description of dissipation. Let our young men be apprenticed and well educated, and then our ships will be in the custody of their proper guardians.—*Ibid.*

OUR NAVY.—It seems to us all-important that Congress should authorize, at the present session, an increase to our navy. We have very few ships in commission, in comparison with the extent of our commerce, and in view of the present state of affairs in the Gulf of Mexico and in the Pacific ocean, where war is raging between Chili and Peru. On this coast we have an extensive commerce which needs the watchful care of our navy. On the the northwest coast of America our trade is interrupted by the armed ships and subjects of Russia, and we have not a single ship of war there. Our ships and fellow citizens who are pursuing a lawful commerce in the East Indies, are *robbed and murdered* by the Malay pirates. These are strong reasons why we should have an increase to our naval force; some 25 or 30 sloops of war should be put into commission, and distributed wherever we have commerce. Our navy *must* be looked to.—*United States Gazette.*

LATEST FROM MEXICO.

NEW ORLEANS, Jan. 31.—By the arrival of the U. S. cutter Woodbury, Capt. Nicholas, from Vera Cruz, we have received dates from that place of the 16th instant, and from the city of Mexico to the 9th inclusive. The most important news is contained in the following letter from an officer of the latter.

Correspondence of the Louisianian.

U. S. GOVERNMENT PACKET WOODBURY,
S. W. Pass, January 26.

GENTLEMEN: Deeming it of importance to our commerce in the Gulf of Mexico, that the merchants should have early information as to the position now taken by the French squadron, I beg you will publish the following statement:

On Wednesday week last, Capt. Paulding of the U. S. ship *Levant*, made an official call upon Admiral Baudin, the commander in chief of the French forces, in the Gulf of Mexico. The Admiral informed Capt. P. that the ports of Tampico and Metamoras were, for the present, opened to commerce, and pledged himself that they should not be again closed without timely notice being given. The port of Vera Cruz, I am sorry to say, is again closed. Merchant vessels are, however, permitted to anchor, but not suffered, under the penalty of confiscation, to land any portion of their cargoes. All ports south of Vera Cruz are as heretofore blockaded. The city of Vera Cruz is now held by a small Mexican guard. Its inhabitants have, by the order of Santa Ana, abandoned the city, with all their moveable effects. The army of Santa Ana is encamped about 12 miles in the interior. There are no active hostilities going on between the belligerent parties; but the very worst feeling prevails. Santa Ana had threatened to destroy the walls of the city, and when I left had introduced powder for that purpose.

Your ob't servant,

NAVAL INTELLIGENCE.

OFFICIAL CORRESPONDENCE.

U. S. SHIP INDEPENDENCE,
Rio de Janeiro, 27th November, 1838.

SIR: I have the honor to state, for the information of the Department, that by a late arrival from the Rio de la Plata, the intelligence has reached here of the declaration of war by General Rozas against the French nation and the provinces of the Banda Oriental.

At Montevideo, every thing remained quiet, and, in

consequence of the restoration of peace, commerce had begun to revive.

The *Fairfield* and *Dolphin* still continue at the Rio de la Plata, for the protection of our commerce.

The Exploring Expedition have all arrived at this place, the *Relief* having arrived last night, after a tedious passage of one hundred days from the United States.

I am happy to say that the officers and crew of this ship continue in excellent health.

I have the honor to be, sir, with much respect, your obedient servant,

JOHN B. NICOLSON,
Capt. com'g U. S. Naval Forces
on the Coast of Brazil.

Honorable **JAMES K. PAULDING,**
Secretary of the Navy.

FLAG SHIP VIACENNES;
Rio de Janeiro, Nov. 30, 1838.

SIR: I regret to inform you of the death of James Smith, third, seaman of this ship, on the 23th inst., by drowning in this harbor, while engaged in the boat towing from the shore a tank of water.

I cannot omit bringing to your notice the bold and praiseworthy conduct of Passed Midshipman William May, who was in charge, and immediately leaped overboard to save Smith, but did not succeed in saving him, as he sunk almost immediately, owing to his having received a blow from an oar accidentally while passing the tow rope.

I have the honor to be, sir, most respectfully, your obedient servant,

CHARLES WILKES,
Com'g Exploring Expedition.

Hon. **JAMES K. PAULDING,**
Secretary of the Navy, Washington.

The following letters are furnished for publication, solely for the purpose of correcting erroneous impressions respecting the manner of Mr. Boyle's retirement from the office of Chief Clerk of the Navy Department: **JANUARY 16, 1839.**

SIR: After active service in the Department for nearly twenty-six years, it is a matter of sincere regret that any act of mine should subject you to difficulty.

Grateful for the confidence reposed, as well as the kindness uniformly manifested towards me, that neither the President of the United States nor yourself may experience embarrassment on my account, I tender for acceptance my resignation as Chief Clerk.

I am, very respectfully, sir,

Your obedient servant,

JOHN BOYLE.

Hon. **JAMES K. PAULDING,**
Secretary of the Navy.

NAVY DEPARTMENT, Jan. 17, 1839.

SIR: Your letter of yesterday, signifying your resignation of the office of Chief Clerk of this Department, was received last evening.

In accepting it, I cannot omit the expression of my regret that a circumstance in no way reflecting on your character, capacity, or usefulness, should have made this step necessary; and that I should, in consequence, lose the services of one whose long experience and faithful assiduity were so valuable to me at this time.

With the most sincere wishes for your future prosperity and happiness, I remain your friend and servant,
J. K. PAULDING.

JOHN BOYLE, Esq., Washington.

ARMY.

OFFICIAL.

**GENERAL } HEAD QUARTERS OF THE ARMY,
ORDERS, } ADJUTANT GENERAL'S OFFICE,
No. 15. } Washington, Feb. 13, 1839.**

THE subjoined list, received from the War Office, is published for general information:

"THE following named officers have been appointed by the President, by and with the advice and consent of the Senate, to take rank from the 7th of July, 1838, and relatively, according to the order upon this list.

"CORPS OF TOPOGRAPHICAL ENGINEERS.*Colonel.*

"John J. Abert, 7 July, 1833.

Lieutenant Colonel.

James Kearney, 7 July, 1833.

Majors.

Stephen H. Long, 7 July, 1833.

Hartman Bache, 7 July, 1833.

James D. Graham, 7 July, 1833.

William Turnbull, 7 July, 1833.

Captains.

William H. Swift, 7 July, 1833.

Wm. G. Williams, 7 July, 1833.

Augustus Canfield, 7 July, 1833.

Campbell Graham, 7 July, 1833.

W. B. Guion, 7 July, 1833.

George W. Hughes, 7 July, 1833.

Thomas J. Cram, 7 July, 1833.

John McClellan, 7 July, 1833.

Washington Hood, 7 July, 1833.

John Mackay, 7 July, 1833.

First Lieutenants.

Howard Stansbury, 7 July, 1833.

Thomas B. Linnard, 7 July, 1833.

Joseph E. Johnston, 7 July, 1833.

Thomas J. Lee, 7 July, 1833.

A. A. Humphreys, 7 July, 1833.

Wm. H. Emory, 7 July, 1833.

John N. Macomb, 7 July, 1833.

J. H. Simpson, 7 July, 1833.

J. E. Blake, 7 July, 1833.

A. P. Allen, 7 July, 1833.

Second Lieutenants.

Lorenzo Sitgreaves, 7 July, 1833.

W. H. Warner, 7 July, 1833.

J. C. Woodruff, 7 July, 1833.

J. W. Gunnison, 7 July, 1833.

E. P. Scammon, 7 July, 1833.

R. McLane, 7 July, 1833.

C. N. Hagner, 7 July, 1833.

W. R. Palmer, 7 July, 1833.

C. Fremont, 7 July, 1833.

Joseph D. Webster, 7 July, 1833.

THE above order of relative rank will supersede the arrangement seen in the corrected Army Register, published in September, 1833, and in the annual Register, for 1839.

BY ORDER OF ALEXANDER MACOMB,

MAJOR GENERAL COMMANDING-IN-CHIEF:

R. JONES, *Adj't. Gen.*

NAVY.**ORDERS.**

Feb. 7.—Comm'r. H. Henry, *Rendezvous*, Baltimore.

Lieut. W. F. Lynch, steam ship *Fulton*.

Lieut. J. W. West, detached from ship *Fulton*.

Lieut. J. M. Watson, *Rendezvous*, Philadel'a.

8—Dr. W. S. W. Ruschenberger, do do

Lieut. A. Sinclair, W. I. squadron.

11—Mid. J. O'Shannessy, Naval School, New York.

Baatswain J. Morris, detached from W. I. sq'n.

RESIGNATION.

Feb. 7.—George W. McLean, 1st Lieut. Marine Corps.

U. S. VESSELS REPORTED.

WEST INDIA SQUADRON—Com. Dallas, on the 27th ult., changed his broad pendant from the ship *Vandalia* to the *Erie*, on which occasion the customary salute was fired. Commander Smoot has assumed the command of the *Erie*.

Ship *Vandalia*, Comm'r Levy, ordered on a cruise to the Gulf of Mexico.

Ship *Ontario*, Comm'r. McKenney, dropped down to the Navy Yard at Pensacola, 31st Jan., preparatory to a cruise.

Frigate *Macedonian*, Captain Kennon, bearing the broad pendant of Commodore Shubrick, at Norfolk on the 10th inst., ready for sea—expected to sail on the 12th.

BRAZIL SQUADRON—Razee *Independence*, Commodore Nicolson, at Rio Janeiro, Dec. 22.

Ship *Fairfield*, Lieut. Comd't. Mackenzie, and brig *Dolphin*, Lieut. Comd't. Purviance, at Buenos Ayres, Dec. 4.

MEDITERRANEAN SQUADRON—No returns from the *Ohio* since she sailed from New York, nor from the *Cynne* for several weeks past.

PACIFIC SQUADRON—Ship *North Carolina*, Commo. Ballard, at Callao, Nov. 29—to sail about 10th Dec. for Valparaiso, and about 1st March for the United States.

Ship *Falmouth*, Capt. McKeever, at Panama, Dec. 16.

Ship *Lexington*, Capt. Clack, on the coast of Mexico, at the latest dates.

Brig *Boxer*, Lieut. Comd't. Nicholson, cruising between Callao and Payta.

Schr. *Enterprise*, Lieut. Comd't. H. Ingersoll, at Callao, Nov. 29, to sail for Valparaiso, Dec. 3.

EXPLORING EXPEDITION—Ship *Vincennes*, Lt. Comdt. C. Wilkes, and Brig *Porpoise*, Lieut. Comd't. Ringgold,

at Rio Janeiro Dec. 22, to leave for Montevideo the next day.

Ship *Peacock*, Lieut. Comd't. W. L. Hudson, and schooners *Flying Fish*, Lieut. Knox, and *Sea Gull*, Lt. Reid, had sailed on a cruise. They were expected to return in a few days to Rio Janeiro.

REVENUE CUTTERS—New brig *Jefferson*, Lt. Comdt. Magoun, from Baltimore, bound to Mobile, went to sea on Monday, 4th inst.

REVENUE CUTTER SERVICE.

Record of promotions, appointments, deaths, resignations, &c., in the revenue cutter service, since the 30th August last.

PROMOTIONS.

Green Walden, to be Captain,	21 Nov. 1833.
Charles B. Childs, to be Captain,	14 Dec. 1833.
Henry B. Nones, to be Captain,	14 Dec. 1833.
Josiah Sturgis, to be Captain,	13 Feb. 1839.
Thomas Sands, to be 1st Lieut.,	21 Nov. 1833.
Thomas Stoddart, to be 1st Lieut.,	14 Dec. 1833.
Charles B. Beaufort, to be 1st Lieut.,	14 Dec. 1833.
Arnold Burroughs, to be 2d Lieut.,	14 Dec. 1833.
Beverly Digges, to be 2d Lieut.,	14 Dec. 1833.

APPOINTMENTS.

Fred. A. Barstow, to be 3d Lieut.,	9 Nov. 1833.
John L. Prouty, to be 3d Lieut.,	16 Nov. 1833.
John R. H. Carnan, to be 3d Lieut.,	21 Dec. 1833.

DEATHS.

Joseph Gold,	Captain.
Philemon Gatewood,	Captain.
David M. Stokes,	2d Lieutenant.

RESIGNATIONS.

William A. Howard,	Captain.
Farnifold Green,	Captain.

DISMISSION.

J. W. Hunter, Jr.,	2d Lieutenant.
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MARRIAGE.

In New Orleans, on the 8th ult., Lieut. A. G. BLANCHARD, of the 3d infy., U. S. A., to Miss M. L. HERMOINE BENOIST, daughter of N. BENOIST, Esq.

DEATHS.

In New York, on the 8th inst., after a lingering illness, Commander MARVIN P. MIX, of the U. S. navy, aged 52 years.

In Charleston, S. C., on the 31st ult., whither he had gone for the benefit of a more genial climate, Captain PHILEMON GATEWOOD, of the U. S. revenue service, in the 34th year of his age. Of few can it be more strictly said, he combined all the qualities which adorn the man and exalt the officer.

At Baltimore, on Sunday evening, 10th inst., after a short but severe illness, Midshipman WM. M. WALLACE, of the U. S. navy, eldest son of THOMAS K. WALLACE, of Philadelphia.

At his residence in Jackson, Tennessee, on the 15th ult., WILLIAM STODDERT, Esq., formerly a resident of the District of Columbia. The deceased was the last surviving son of the late BENJAMIN STODDERT, the first Secretary of the Navy.

At the navy yard, Charlestown, Mass., on the inst. Mr. JAMES N. DAVIS, Sailmaker U. S. navy.